AMENDMENT TO THE SPECIFICATION

Please amend the paragraph appearing on page 15, lines 3-14 with the following amended paragraph:

In FIG. 6, a flow chart schematically illustrates how the continuous adaptive control equations are implemented in a discrete process or digital circuitry. The process starts at 300. At 302, a current (Nth) update of the position error signal e_N and the setpoint 2_{dN} are acquired and stored in memory. Next, current and past values are retrieved from memory at 304 so they are available for real time calculations. At 306, digital calculations are executed to calculate first derivative of e, an integral of e, and a second derivative of 2_d using the values retrieved at 304. At 308, an updated controller output u_N is calculated using the values obtained at 306. At 310, process flow returns to 300 to execute the calculations again for the N+1 update. The process flow is iterative or repetitive. The values of $\hat{A}$ are updated in a discrete calculations as illustrated at 307 in FIG. 6. The formula in 307 is as follows:

$$\hat{A}_N = \left(\dot{e}_N + 2\lambda e_N + \lambda^2 \sum_{0}^{n=N} e_n \Delta t \right) \left(\ddot{\theta}_{dN} + 2\lambda \dot{e}_N + \lambda^2 e_N \right) \Delta t + \hat{A}_{N-1}$$

Eq. 33

Adaptive parameter data $\hat{A}$ is updated digitally in real time using instructions stored in a computer readable program storage device.